

WHAT IS CLAIMED IS:

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1. A folding type portable radio machine,  
comprising:

10 a chassis part formed by a first chassis  
and a second chassis, the second chassis being  
foldably connected to the first chassis,

wherein the chassis part includes:

15 a conductive part having conductivity  
whose full length is an approximately half wave  
length ( $\lambda/2$ ) of a using frequency of the radio  
machine, and

an electric notch.

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2. The folding type portable radio machine  
as claimed in claim 1,

wherein an antenna is provided at a side  
of the electric notch.

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3. The folding type portable radio machine  
30 as claimed in claim 1,

wherein the conductive part has a width of  
an approximately one fourth wave length ( $\lambda/4$ ) of  
the using frequency of the radio machine or shorter,  
and

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the electric notch has a full length from  
an approximately one tenth wave length ( $\lambda/10$ ) to an  
approximately one fourth wave length ( $\lambda/4$ ) of the

using frequency of the radio machine.

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4. The folding type portable radio machine  
as claimed in claim 1,

wherein the conductive part is a printed  
board module that is provided inside of the first  
10 chassis and the second chassis.

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5. The folding type portable radio machine  
as claimed in claim 1,

wherein the electric notch has a width of  
an approximately one fourth wave length ( $\lambda/4$ ) of  
the using frequency of the radio machine.

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6. A folding type portable radio machine,  
25 comprising:

a first chassis having conductivity; and  
a second chassis having conductivity and  
being foldably connected to the first chassis by a  
hinge mechanism part,

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wherein the hinge mechanism part has a  
part making the first chassis and the second chassis  
have an electric continuity state, and a part not  
making the first chassis and the second chassis have  
the electric continuity state, and

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a full length of the first chassis and the  
second chassis is an approximately half wave length  
( $\lambda/2$ ) of a using frequency of the radio machine.

7. The folding type portable radio machine  
as claimed in claim 6,

5        wherein the part making the first chassis  
and the second chassis have the electric continuity  
state, of the hinge mechanism part, includes a first  
connection part provided at a lower part of the  
first chassis and a second connection part provided  
at an upper part of the second chassis, and

10        a conductor is put between the first  
connection part and the second connection part.

15        8. The folding type portable radio machine  
as claimed in claim 6,

20        wherein a length between the part making  
the first chassis and the second chassis electric  
have the continuity state and the part not making  
the first chassis and the second chassis have the  
electric continuity state is an approximately one  
fourth wave length ( $\lambda/4$ ) of the using frequency of  
the radio machine.

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9. The folding type portable radio machine  
as claimed in claim 6,

30        wherein a conductive member extends from  
the part making the first chassis and the second  
chassis have the electric continuity state to the  
part not making the first chassis and the second  
chassis electric have the continuity state, and  
35        forms a designated intervals with the second chassis.

10. The folding type portable radio machine as claimed in claim 6, further comprising a coaxial line connecting the first chassis and the second chassis, the coaxial line having a length of  
5 the approximately half wave length ( $\lambda/2$ ) of the using frequency of the radio machine.

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11. The folding type portable radio machine as claimed in claim 10,  
further comprising a bendable printed  
board electrically connecting a printed board module  
15 provided inside of the first chassis and a printed board module provided inside of the second chassis,  
wherein the coaxial line winds around the bendable printed board.

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12. The folding type portable radio machine as claimed in claim 6,  
25 further comprising an antenna being capable of extending against the second chassis, the antenna being provided at a side of the part not making the first chassis and the second chassis have the electric continuity state, of the hinge  
30 mechanism part.

13. A folding type portable radio machine,  
35 comprising:  
a first housing having a first chassis

having conductivity where a printed board is provided inside thereof;

5 a second housing having a second chassis having conductivity where another printed board is provided inside thereof;

an antenna being extendable to a back surface of the first housing, the antenna being provided at one of left and right sides of the second housing;

10 wherein the antenna is fed an electric power supply by a feeder circuit of the other printed board provided at the second chassis,

the first chassis and the second chassis are connected by connection parts provided left and right,

the connection part at the side where the antenna is positioned non-electrically connects the first chassis and the second chassis,

20 the connection part at the other side electrically connects the first chassis and the second chassis, and

a full length of the radio machine is an approximately half wave length ( $\lambda/2$ ) of a using frequency of the radio machine.

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14. The folding type portable radio machine as claimed in claim 13,

30 wherein the first chassis is electrically connected to an earth conductor pattern of the printed board provided at the first chassis and the second chassis is electrically

35 connected to an earth conductor pattern of the printed board provided at the second chassis.

15. A folding type portable radio machine,  
comprising:

- a first housing that has a first chassis having conductivity, the first housing having a printed board provided inside thereof; and
- a second housing that has a second chassis having conductivity, the second housing having another printed board provided inside thereof;  
wherein the first chassis and the second chassis are physically connected by a first connection part and a second connection part provided left and right,  
the first connection part electrically connects the first chassis and the second chassis,
- the second connection part does not electrically connect the first chassis and the second chassis,

a full length of the radio machine in a case where the first housing is opened from the second housing is an approximately half wave length ( $\lambda_1/2$ ) of a first using frequency of the radio machine;

- an interval between the first connection part and the second connection part is an approximately one fourth wave length ( $\lambda_2/4$ ) of a second using frequency of the radio machine; and
- the first chassis, the second chassis, the first connection part, and the second connection part, as an installed antenna of the radio machine, send and receive radio waves having the first and second using frequencies.

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16. A chassis provided inside of a folding type portable radio machine, comprising:

a first chassis part;  
a second chassis part; and  
a plurality of connection parts provided  
at the first chassis part and the second chassis  
part, the connection parts connecting the first  
chassis part and the second chassis part;  
wherein only a surface of one of the  
connection parts at the second chassis part  
connecting to the one of the connection parts at the  
first chassis part is made of non-conductive  
material.

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17. The chassis provided inside of the  
folding type portable radio machine as claimed in  
claim 16, wherein only the one of the connection  
parts at the second chassis part is made of non-  
20 conductive material.

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18. The chassis provided inside of the  
folding type portable radio machine as claimed in  
claim 16, further comprising a conductive member  
forming a designated interval with the second  
chassis and extending from the vicinity of the one  
30 connection part of the second chassis to another  
connection part of the second chassis.